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Prehistoric Remains in Central India.—By J. H. RIVETT-CARNAC, ESQ.,
C. I. E., F. S. A., M. R. A. S., &c.

At a meeting of the Society held in 1874, some iron implements dug out of the barrows of the Nagpore district of the Central Provinces were exhibited by me, and a brief notice was then given of those grave-mounds and their contents. I have long intended preparing for the Society the detailed description together with sketches of these interesting remains then promised. But various circumstances have delayed the working up of the notes taken on the spot and the copying of the sketches, and I am only now able to offer them to the Society.

Last year when in France, I paid a visit to the Museum at St. Germain-en-Laye, celebrated for its prehistoric collection, and there the resemblance between the remains, dug out of tumuli in Brittany and other parts of France, and the contents of the Nagpore barrows presented itself in the most striking manner. M. Bertrand the Director of the Museum and President of the Society of Antiquaries of France, to whom the subject was mentioned by me, strongly urged the preparation of a detailed account of the Indian grave-mounds and their contents, together with sketches, so as to admit of further comparison between the Indian and European types.

The subject is well known to the Society, but it is hoped that the following details may not be without interest, and that they may assist in directing further attention to the extraordinary resemblance between the Prehistoric Remains of India and of Europe.

Barrows or grave-mounds, surrounded by circles of stones, are found in several districts of the Nagpore province. They have been examined

and described at various times by Colonel Glasfurd, Colonel Godfrey Pearse, R. H. A., and Mr. J. J. Carey, C. E. The late Rev. Stephen Hislop, well known for his interest in all antiquarian subjects, accompanied Sir Richard Temple, the then Chief Commissioner of the Central Provinces, on an exploration of the Bori remains during the rainy season of 1864, and it was then that occurred the accident which resulted in Mr. Hislop's lamented death.

Similar barrows were found in the Nizam's territory and in Madras by the late Colonel Meadows Taylor, C. S. I., and an interesting account of that officer's researches, by which the similarity of the remains found in India and in Europe is clearly demonstrated, was published in the *Journal of the Royal Irish Academy*. The *Journal of the Asiatic Society* also contains descriptions by Colonel Dalton, C. S. I., of similar grave mounds and circles in the hilly country of Chutia Nagpore, which in many of its conditions resembles the districts of the old Nagpore province.

The most extensive of the many groups of this class of tumuli that are found scattered over the district of Nagpore is situated near Junapani, a hamlet lying about 5 miles to the west of the civil station of Nagpore, on the high road to Katole. The proximity of these barrows to Nagpore has marked them out for careful investigation, and they have been visited and opened at various times by the late Rev. S. Hislop, Mr. Henry Dangerfield, C. E. and Mr. Hanna, C. E. No detailed account of the discoveries has as yet been published. The following notes refer chiefly to some explorations made as far back as the cold weather of 1867 by Mr. Alfred Lyall, C. S., then Commissioner of the Nagpore S. Division, Mr. Blanford, F. R. S. and myself.

From the people of the neighbourhood, and even from the Bráhmans and other learned persons of Nagpore, who speak with authority on the ancient history of the province, no satisfactory information regarding the tribes who constructed these barrows is to be obtained. Some will tell you the story that these mounds are the work of giants, or of the Gaoles or Shepherd kings, regarding whose rule in Central India, at a period prior to the Aryan invasion, a deep-rooted tradition exists. That the circles are very old, the condition in which they are now found distinctly shews, and the remains discovered therein leave no doubt that they were once the burial-places of a people of whom these circles are now the only trace that remains to us.

The southern slope of a line of low bare basaltic hills, which rise just beyond the village of Junapani, and which form the chief feature in the scenery of Nagpore and its neighbourhood, is covered with these barrows. The largest group consists of 54 tumuli. A smaller group situated on an adjacent spur, at about 300 yards from the main body, contains but 10

barrows. Further south again, at a distance of about half a mile, on the other side of the village, is a third group. The position is somewhat low and damp, the ground sloping towards the small stream which runs past the village of Junapani. The remains discovered by Mr. Hanna were dug out from the barrows of this group, and were found in a less perfect state of preservation than the iron implements from the tumuli situated further up on higher ground on the hill side. A fourth and still smaller group, situated further north, was examined by Mr. Henry Dangerfield. For several miles round, similar collections of barrows, which have not yet been noted or explored, are to be seen festooning with their dark funereal boulders the slopes of the low trap hills which extend far south towards the Wurdah river.

A rough plan of the Junapani circles accompanies this paper; see Plate I.

In all these groups the tumuli are of the same type, consisting of circular mounds of earth of various sizes, surrounded by single and, in some instances, by double rows of trap boulders, selected from the masses with which the hill-side is strewn and the presence of which in great numbers, ready to hand, doubtless suggested the locality as a burial-place to the tribes so many of whose members lie here entombed. The diameter of the circles varies from 20 feet to 56 feet, the tomb being perhaps of large or inferior dimensions according to the consideration of the person buried. No barrow of the groups as yet examined by me exceeds 56 feet in diameter; and 56 feet seems to have been a favourite size, as each group contains several tumuli of exactly these dimensions.

The trying climate of Central India, with its prolonged scorching heat, followed by drenching rain, so destructive to every sort of masonry building, has told with great severity upon even these solid masses of trap rock. They are all more or less wrinkled by age, and in some cases the stone has been split and its outer coating stripped off by the action of heat and damp, and it is doubtful whether the boulders that have thus suffered now retain their original form. There is thus some difficulty in determining whether they have been artificially shaped. It would appear from the resemblance borne by most of the blocks, ranged round the tumuli, to the still undisturbed masses with which nature has strewn the hill side, that, in most cases, the stones were not dressed, but that boulders of about the same size, bearing the nearest resemblance to oblong cubes, were chosen from the masses on the hill side and rolled down to the site of the tumulus, and then ranged side by side in their natural state round the circular mound of earth raised over the grave. Each circle, however, generally contains two or three stones, larger than their neighbours, which from the comparative regularity of shape would appear to have been artificially dressed. It is on these selected stones that the "cup-marks," resembling those found on

exactly similar tumuli in Europe are to be seen. And it suggests itself that the boulders were perhaps specially prepared to receive the inscriptions or ornamentation for which these marks were designed.

So far as can be judged from the present appearance of the stones at Junapani, they were certainly in most instances laid lengthways, side by side, round the edge of the circle, in a manner resembling the arrangement of the stones in the Clava Tumulus figured on plate XI of Sir J. Simpson's "Archaic Sculpturings" (see Plate II, fig. 1 and Pl. V, fig. 1) a work to which it will be necessary to make frequent references in the present paper. Mr. Carey was, I believe, of opinion from the appearance of the stones at the Khywarree barrows examined by him, that the blocks had once been placed on end, and it is not improbable from the position of some of the largest blocks at Junapani, that some of these also may have been so placed. One of the stones covered all over with cup-marks supports this view. It is conical in shape. It is the largest of the many large blocks at Junapani. Its dimensions are as follows: length ft. 10·3; breadth ft. 2·4, and height above the ground as it lies ft. 2·6. This block, and indeed nearly all those surrounding these tumuli have sunk deep into the earth and there is perhaps half as much below the surface of the ground as appears above it. Making allowance for this, the cubic contents of the stone would be say 16,000 feet, and taking 200 lbs. to the cubic foot of trap rock, the weight of this stone would be about 8 tons. The stones on the north side of the circle, whence the drainage of the hill is, are deeply imbedded in the earth, and are sometimes hardly to be traced above the ground, the washings of the hill side, carried down by the drainage of ages, having nearly covered them up completely.

The height of the mounds within the circles of stones is seldom more than from 3 to 4 feet above the level of the neighbouring ground. There is no doubt, however, that the mounds, now nearly as hard as the rock itself, were originally composed of earth, loosely thrown up, and were consequently much higher than they now are. In the course of many years, perhaps centuries, the boulders, surrounding these mounds, have sunk deep into the hard soil, and during the same period the once loose earth has become consolidated and compressed into its present form. In Plate III one of these barrows is shewn, the stones being ranged round the mound shewn in the background. In the foreground are some boulders of a tumulus that has been disturbed and examined.

The number, size and position of the barrows will be best explained by the accompanying plan Plate I. It will be noticed, that the largest barrows are generally placed low down on the slope of the hill, the smaller circles, with the smaller stones being grouped on the top, and it suggests itself, that for the former tumuli the large boulders had to be selected from particular

spots and rolled down the slope, whilst for the smaller tombs stones could be collected without difficulty at the summit or on any part of the hill side.

Although, on no one occasion, has a collection, so varied as that which rewarded Colonel Pearse's exploration of the large solitary tumulus near Kamptee, been discovered, no single barrow at Junapani has been opened without remains of more or less interest being exhumed. The class of iron implements found in these tumuli in different parts of the Nagpore district, and further south again, resemble one another as closely as do the tumuli themselves. Some half a dozen barrows only have as yet been examined, out of the many hundreds which are known to exist, so that further and more interesting discoveries may not unreasonably be expected from future explorations, if conducted on a careful plan.

The remains discovered were all found in the centre of the barrows. The earth, which had to be dug through, was invariably extremely hard and firm, as if many centuries had weighed it down and compressed it into its present compact form, changing soft earth into stiffish clay. The remains were always reached with considerable difficulty. On each occasion that I have examined these tombs, the first indication of "a find" has been broken pieces of pottery of red or black clay, which generally make their appearance at from 2 to $2\frac{1}{2}$ feet from the surface. Immediately beneath these, the fragments of metal implements, and ornaments are come upon, together with further traces of broken pottery in considerable quantity. The fragments are evidently the remains of urns originally placed intact within the tombs, but which, consequent on the tumulus having no interior chamber, have been broken by the masses of earth and stone thrown in to fill up the mound. In two cases the shape of the urns imbedded in the clay was distinctly traceable, but it was found impossible to take them out intact. I regret I did not know at the time, what I have since learnt from M. Bertrand and have seen demonstrated at the Museum of St. Germain, that the pieces, if carefully collected, can generally be joined together after the manner of a Chinese puzzle, and the original form can thus be satisfactorily reproduced.

With the urns the whitish coloured earth (noticed by Col. Meadows Taylor in the Dekhan remains), offering a striking contrast to the surrounding dark soil, is met with. I am unable at present to say of what this substance consists. It is probably the remains of bones. On only one occasion have traces of human remains been found at Junapani, and in this instance six small pieces of bone, weighing $\frac{5}{8}$ ths of an ounce only, were obtained.

The implements discovered with the urns are, with one exception, of iron. The most interesting of them are figured in Plate IV, and the following remarks will help to describe generally their peculiarities:

Nos. 1, 2 are pieces of iron, thickly encrusted with lime and rust, found by Mr. Hanna in the group of barrows near the Junapani stream, to which allusion has already been made. The damp situation seriously affected these specimens, and they are not in such a good state of preservation as the other remains found in the vicinity. They offer hardly any attraction to the magnet.

No. 2 was also found by Mr. Hanna in the same group. It has suffered severely from rust, but the form is intact. It resembles a "spud," but it is not improbably a "palstave" of which many specimens have been found in similar tombs in Scandinavia and in Great Britain. It has no "eye" through which to loop the thong by which palstaves are supposed to have been attached to a wooden handle. But I find that, in some of the Irish specimens also, these eyes are wanting, (see figure 275, No. 510, page 384, Vol. I, of a Descriptive Catalogue of the Antiquities of the Museum of the Royal Irish Academy, by Sir W. Wilde, Dublin, 1863). The palstave found at Junapani exactly resembles this specimen.

Similar implements have been found by Col. Glasfurd in tumuli in the Godavery district, and at page 358, Vol. XXIV, of the Transactions of the Royal Irish Academy, in a paper by Col. Meadows Taylor, c. s. 1., describing "The Cairns, Cromlechs, Kistvaens and other Celtic, Druidical or Scythian monuments in the Dekhan," will be found figured a similar implement discovered in one of the tumuli of the Hyderabad country. I may mention here incidentally, that Col. Sladen, who made an expedition from Mandalay to the western borders of China, mentioned to me, that implements similar to these, but having in addition the "eye" so well known in the palstaves of Europe, were discovered by him on his travels. Length of specimen $4\frac{3}{4}$ inches.

No. 3 is a knife or dagger, much corroded, found by Mr. Hanna in the same group. The guard at the hilt is perfect on one side, on the other side the rust has flaked off, taking with it the iron of the guard. Length $5\frac{1}{2}$ inches.

No. 4 is a smaller specimen of a hatchet or battle-axe, similar to the one found by Col. Pearse, and resembling Nos. 5, 11 described below. In these specimens the bands are wanting. It will be seen that the rust is coming off the hatchet in great flakes and the bands have most probably corroded. Length 6 inches; breadth 2 inches.

No. 5 is the best specimen of the battle-axe or hatchet that has yet been discovered. It was found by Mr. Henry Dangerfield in one of the outlying groups of barrows near Junapani. The bands, with which the axe was fastened on to the wooden handle, are in perfect preservation. Length 10 inches.

This iron axe bears a remarkable resemblance in shape to the copper

“celt,” figured at page 363 of Sir W. Wilde’s Catalogue of the Irish Antiquities above referred to. At page 367, Sir W. Wilde shows how this class of celts is supposed to have been fixed on to the handle, and he writes : “ Fig. 252 represents 2 simple, flat, wedge-shaped celts passed through a wooden handle and secured by a ligature, possibly of thong or gut.”

And on the preceding page, he remarks—

“ Left without historic reference, and with but few pictorial illustrations, we are thrown back upon conjecture as to the mode of hafting and using the metal celt. As already stated, this weapon-tool is but the stone implement reproduced in another form, and having once obtained a better material, the people who acquired this knowledge repeated the form they were best acquainted with, but economized the metal and lessened the bulk by flattening the sides. In proof of this repetition in metal of the ancient form of stone celt may be adduced the fact of a copper celt of the precise outline, both in shape and thickness, of one of our ordinary stone implements having been found in an Etruscan tomb, and now preserved in the Museum of Berlin.”

In this specimen, however, as indeed in the case of nearly all the iron axes found in Central India, the bands are of iron. And it does not appear unnatural, that, the tribes who used these weapons having discovered the use of iron, and the place of the stone hatchet having been supplied by an improved axe of iron, the ligatures of thong too, should, in like manner, have given way before the bands of iron shewn in the engraving. An axe, similar to this one in nearly every respect, was found by me in the main group of barrows at Junapani. One of the bands, however, was missing. In another case the bands were found loose by the side of a small axe to which they evidently belonged. Col. Glasfurd found in the Godavery district an iron axe similar in other respects to these, but without the bands. I am inclined to think that the bands, being of thinner metal than the weapon itself, may have been eaten away by rust and have thus disappeared. The specimen found by Mr. Dangerfield is in excellent preservation, the spot on which it was found being dry and hard.

This axe was shewn to Col. Maisey, some of whose beautiful drawings of the Bhilsa or Sanchi Topes are engraved in General Cunningham’s work. He immediately remarked, that the specimen exactly resembled the weapons carved on the “ Topes ” of which he had made sketches years before. A reference to Plate XXXIII, Fig. 8, Cunningham’s Bhilsa Topes,* will shew the hatchet with bands. In the carving on the Tope the bands are not placed well in the centre. But the accuracy of the native sculptor may have been at fault. A hatchet fastened on to the wood in the manner re-

* See also “ Orissa ” by Dr. Rájendralála Mitra, c. I. E.

presented, would have been liable to fly out of the handle, an accident which the position of the bands of the specimens found in the barrow is better calculated to prevent. In Plate XXXII, Fig. 1, "Fergusson's Tree and Serpent Worship" will be found a representation of a bas-relief on the eastern gateway at Sanchi described by Mr. Fergusson as follows: "In itself it (the bas-relief) represents a family of *Dasyus* following their usual avocation. On the right hand, two men are splitting wood with hatchets, and what is more remarkable is, that the heads of their axes are tied on to the shafts as if they were of stone. Yet in the same bas-relief we have the tongs or ladles which certainly are of metal; and we can hardly understand a people who could make metal femurs using stone hatchets."

It is probable then, that the carving on the Sanchi Tope is intended to represent a metal hatchet such as that discovered in the barrow and marked No. 5. And it suggests itself that the tumuli at Junapani are the remains of an aboriginal tribe, whose presence on the Sanchi sculptures, in contradistinction to the followers of Buddha, is distinctly traced by Mr. Fergusson. The significance of this point will be noticed more in detail later.

No. 6. A spear-head, much corroded, which was dug up by me from a Junapani barrow. The large axe, with one band, above alluded to, was found by its side; and, as in every instance, broken pottery in large quantities was dug up. Length $8\frac{1}{2}$ inches.

No. 7. Six bangles or bracelets, found by Mr. Henry Dangerfield in a barrow adjacent to that in which the axe was discovered. They are graduated in size, and weigh from $5\frac{1}{2}$ oz. to $3\frac{1}{4}$ oz., the whole set weighing 1 lb. 10 oz.

The metal of which they are composed is apparently copper. A rough analysis that has already been made shows that copper is the principal ingredient, but points to the presence of alloy which is neither zinc nor tin, but which is believed to be gold or silver, possibly both. The bangles are thickly covered with a coating, in which the verdigris of the copper is apparent. But, with it, is a further substance which may be either an artificial varnish, or one supplied by organic matter and the discolouration of the metal during the many years the bangles must have been buried.

An interesting circumstance connected with these bangles is the peculiar ornamentation on one end of each of the specimens. The coating of verdigris and varnish, above alluded to, is so thick, that, at first, the markings might escape notice. But a more careful inspection and the removal of the coating of verdigris shew a series of notches or punched or filed lines, resembling exactly the "herring-bone" ornamentation found on the Irish remains, which is described and figured at page 389 of Sir W.

Wilde's Catalogue before noticed. The number of the punched lines on each ornament varies from 14 to 16, and these are placed in three rows.

I have not Mr. Fergusson's paper at hand, but I think I remember reading in his description of the Amravati Tope, that in the carvings there two distinct races are traceable, the Aryans and a non-Aryan race, the latter wearing heavy bangles of the description shewn in the plate and which are similar to those still worn by the Brinjarah women and by some of the aboriginal tribes.

No. 8 is a small circular clear pebble. It was found by me in barrow No. 37, together with only one small piece of iron and a quantity of pottery. In its dirty state it did not appear very inviting, and I was at first inclined to throw it away together with the earth and stones dug out of the barrow. But as it seemed to be of a different substance from the other stones of the formation, it was preserved. I am not prepared to say that it is really a curiosity. But one side of it bears a striking resemblance to the "Altar Stone" No. 102, figured at page 132, of Sir W. Wilde's Catalogue. It has the four finger-marks on one side, on the other side a larger "finger-mark" corresponding with the large central "finger-mark" of the sketch. It may have been an ornament or amulet, and may have been set in a claw, fastened on to the two central "finger-marks."

The following specimens were all dug out of the barrow at Junapani, No. 37 in the plan, in the presence of Mr. Lyall, Mr. Blanford and myself, in January 1867. Our first impression on visiting the spot was, that as all the barrows were so much alike, it would be well to trust to chance and to open the tumulus nearest at hand. Further examination, however, brought to notice three barrows, rather more imposing-looking than those of the main group, situated at some little distance from it, in a quiet, pleasant spot near a small stream, on the south side of the hill. The centre barrow was encircled by a double row of black boulders. The circles flanking the main tomb on either side consisted of single rows of stones somewhat smaller and less imposing in character. The appearance of this small group suggested, that the centre tomb was, perhaps, that of some chieftain who had been buried with his wives or favourite children apart from his followers, in a quiet and specially selected spot. It was accordingly determined to open the centre and most imposing-looking tomb, which measured 58 feet in diameter and is the largest of the 54 barrows that form the main group at Junapani.

After digging through about 3 feet of thick, caked soil nearly as hard as stone, we came upon broken pieces of pottery in which mica was prevalent, and from amongst the fragments the iron implements, figured in

Plate IV, Nos. 9-14, were collected. The excavation had evidently been carried down to the rocky basis of the hill, and earth filled up over the remains. Though thickly encrusted with rust, some of which subsequently flaked off, the iron was in good preservation owing to the dryness of the soil in which it had been buried. The photographs shew the implements as they looked some six months after they were found, after they had undergone some rough handling. No traces of human remains were found. They had perhaps long since disappeared.

No. 9. Small pieces of rusty iron, possibly arrow-heads, &c. (?)

No. 10. Spear heads (?)

No. 11. Axes, small specimens of No. 5. In one specimen the bands are perfect. They are wanting in the other.

No. 12. A snaffle bit in excellent preservation. The form is quite that of the present day. But, after all, this is hardly very remarkable and cannot be held to militate against the antiquity of the remains. The dagger, the sword and the spear have not undergone any great change during many centuries, and the snaffle as the easiest bit for a horse's mouth would have suggested itself at an early date to a race of horsemen.

No. 13. A small brooch, or buckle, or ornament, resembling in shape a bow and arrow. It will be noticed that both this and the axes are in miniature. I cannot find the passage in Herodotus, but, if I am not mistaken, it is mentioned either by him or one of the old writers, that a custom prevailed among the Scythians or nomadic tribes of that class, of burying with their dead their weapons and horse-trappings, or the miniatures of their weapons.

No. 14. A pair of iron articles of exactly the same size and shape with loops at either end. At first it was thought they might be horse bits. It afterwards suggested itself that they must be stirrups. The sculpturings on the remains found in England are supposed by some, to be rough representations of the articles buried in the tumuli. Without pausing to enquire whether this view is correct, the somewhat singular resemblance between the remains, found in this barrow, and the sculptures on the wall of the Deo Cave, Fife, may be noticed (see Plate XXXIV, Fig. 3, Sir J. Simpson's *Archaic Sculptures*). The so-called "spectacle marks" may be the bit, and the form of the stirrups and spear-heads may be traced in Sir J. Simpson's sketch, without the exercise of any very great stretch of the imagination. To the view, that these are indeed the stirrups of the rider, the bit of whose horse and whose spear and other weapons were buried by his side, I still adhere, believing that the foot of the horseman was placed on the piece of iron, which formed the base of a triangle, the two sides being perhaps composed of thongs passed through the loops at either end. This view receives further confirmation from the extract of Professor Stephen's note to Frithiof's Saga, extracted in a later paragraph.

Although the excavation has been extended to the solid rock, neither on this nor on any other occasion has any chamber, similar to that of other parts of India, been found beneath the mounds of the Junapani barrows. This I believe is to be accounted for by the fact, that, in the vicinity of these remains, no material like sandstone, which can be easily split and used for the walls of chambers, is to be found. In the basaltic formation of the Nagpur district, trap-boulders are the only stones available, as the contractors who had to build the bridges on the Nagpore Branch of the G. I. P. Railway found to their cost. Although these boulders answer admirably for the boundaries of the circles, they are not equally well adapted to the interior chambers. Moreover, the trap rock is here close to the surface, and a cavity for a chamber, even if the stone necessary for its construction were at hand, could only be excavated with the greatest difficulty. Further West and South again, when we come on the sandstone formation, Kistvaens and Cromlechs of sandstone take the place of, or are found in connection with, the stone circles, suggesting the view, that the same class of people in different parts of the country built Kistvaens, where the easily worked sandstone was procurable, whilst, in the trap region, they contented themselves with the barrows, such as those found at Junapani.

In addition to the iron implements figured in Plate IV and described above, many other pieces of rusty iron, some of which have no character whatsoever, and the probable use of which it is not easy to conjecture, have been found in the tombs at Junapani, Takulghat, in the Godavary district and elsewhere. Sickles similar to those figured in Col. Meadows Taylor's paper, page 357, Vol. XXIV, of the Transactions of the Royal Irish Academy, and found by that Officer in the Dekhan, have been dug up by Col. Glasford and the late Rev. Stephen Hislop. The barrow opened by Mr. Carey, again, was found to contain bells, the counterpart of those which had been dug up by Col. Meadows Taylor in the same class of tomb, some hundreds of miles further South.

SIMILARITY BETWEEN THESE TUMULI AND THE BARROWS OF EUROPE.

The tumuli at Junapani and the remains found within the barrows having been described, the remarkable resemblance, borne by these tumuli and their contents to the sepulchral mounds and the remains common in other and distant parts of India and in other countries of the world, has to be noticed.

In the first place, the barrows and their contents near Nagpur are identical in nearly every single detail with those on the Godavary. In the southern parts of India, where trap boulders are not procurable, the tumuli, as noticed above, take the form of Kistvaens and Cromlechs, sometimes with and sometimes without the stone circles. The remains found within this class of tombs and the position of tombs indicate that they are the burying-

places of the same class of people, who for very good reasons had, in different parts of the country, to make use of different materials, on the same principle that an engineer adapts his class of work to the stone found in the locality in which he is engaged.

Col. Meadows Taylor, in his paper already alluded to, has placed side by side, in his sketch, barrows, examined by him near Alnwick in Northumberland, and the tumuli of the Dekhan of India, explored by him in 1851; and it will be seen that, in nearly every respect, these burial-places are counterparts of one another. What has been said regarding the Dekhan remains and those found in Great Britain, applies with equal force to the tumuli of Junapani and the European; and Mr. Kipling's drawing, from my sketch, of a barrow near Nagpur, given in Plate III, and one near Alnwick in Northumberland, figured by the late Col. Meadows Taylor in the paper already referred to, will show, most distinctly, the striking resemblance between the tombs in England and in India.

This interesting circumstance was noticed some years ago by Major-General Cunningham, C. S. I., C. I. E., of the Royal Engineers, who in the preface to his description of the Bhilsa Topes thus refers to it—

“To the Indian antiquary and historian, these discoveries will be, I am willing to think, of very high importance, while to the mere English reader they may not be uninteresting, as the massive mounds are surrounded by mysterious circles of stone pillars, recalling attention at every turn to the early earthworks or barrows, and the Druidical colonnades of Britain.

“In the Buddhistical worship of trees displayed in the Sanchi bas-reliefs, others, I hope, will see (as well as myself) the counterpart of the Druidical and adopted English reverence for the oak. In the horse-shoe temples of Ajanta and Sanchi many will recognise the form of the inner colonnade at Stonehenge. More, I suspect, will learn that there are Cromlechs in India as well as in Britain, that the Bráhmans, Buddhists and Druids all believed in the transmigration of the soul, and the Celtic language was undoubtedly derived from the Sanscrit &c.”

The circumstance of the remarkable similarity in the shape of the tumuli being borne in the mind, the next point of resemblance is the position in which the barrows are found. Col. Meadows Taylor particularly notices, that, both in Europe and in India, these burying-places are situated on the southern slope of the hill, the sunny side in fact, and this circumstance has already been noticed in regard to the grouping of the Junapani barrows.

SIMILARITY BETWEEN THE REMAINS FOUND IN THE INDIAN BARROWS AND THE CONTENTS OF THE BARROWS IN EUROPE.

If these two points have been established, then the third point of resemblance is in the remains buried in the tombs. Passing from the pot-

tery urns to the metal articles found within the barrows, it is to be noticed, that, both in England and in India, the arms and ornaments of the deceased were buried with him. Further, if the list of weapons given above, sketches of some of which accompany this paper (Pl. IV), be examined, it will be seen, that to nearly every single implement or ornament, found in India, an exact counterpart can be traced among the specimens dug out of similar tumuli in Ireland, which are now in the Museum of the Royal Irish Academy in Dublin.

As further evidence on this point and in support of the view expressed in an earlier paragraph that we had indeed the good fortune at Junapani to come upon the remains of some chieftain who had been buried centuries ago with his arms and horse-trappings, I would refer to the account in Bishop Tegnier's *Frithiof's Saga* of the ceremonies of the burial of king Ring, and of the barrow in which the body of the old king was laid, together with his charger and his arms. Professor Stephens of Copenhagen, whose translation of the poem is well known, was good enough to send me a copy of his work some years ago when he heard of our success at the Junapani barrows. And in the note to the word "barrow," which accompanies the text, is the following description of a tumulus and its contents discovered by Russian officers in the steppes of Tartary. This description, so exact is the resemblance in detail, might have been written of the opening of the Junapani barrow, with the exception that, there being no stone other than trap rock available within many miles of Nagpur, the Junapani tumulus contained no stone vault.

"Barrow (perhaps derived from Berg, hill), grave, mound, sepulchral heap, was a vast mass of earth and stones raised over the remains of a chief or warrior of renown. Commonly one or more timbered or walled chambers protected the corpse from contact with the soil itself. Such barrows or cairns are found in Scandinavia and in the British Isles, Poland and Russia, especially in the steppes of Tartary. The borderers upon these deserts (near Tromsky) have for many years continued to dig for treasure deposited in these tumuli, and the Russian Court, being informed of these depredations, despatched an officer to open such of the tumuli as were too large for the marauding parties to undertake. He selected the barrow of largest dimensions, and a deep covering of earth and stones having been removed, the workman came to vaults. The centre and largest, containing the bones of the chief, was easily distinguished by the sword, spear, bow, quiver and arrow, which lay beside him. In the vault beyond him, toward which his feet lay, were his horse and bridle and stirrups."

The implements figured in Plate IV have been made over by me to Mr. Franks, F. R. S., F. S. A., of the British Museum.

We have then three very striking points of resemblance. In both countries the class of tumuli is the same; the barrows are always placed

on the same side of the hill, *i. e.*, on the southern slope; and the remains found within these tumuli are almost identical in character.

SIMILARITY BETWEEN THE MARKS FOUND ON THE STONES AND THE "CUP MARKS" OF THE BARROWS IN EUROPE.

There is yet a fourth and most remarkable circumstance which goes far to establish the identity of the remains found in Central India with the well-known prehistoric tumuli of Europe. This is the form of the "cup-marks" on the stones surrounding the tumuli, the existence of which on the Indian remains I was fortunate enough to be the first to discover. These cup-marks on the Junapani tumuli and similar markings in the Kumaon hills have already been noticed in my paper in the Rock markings in Kumaon (see the Journal of the Society for January 1877), but the subject requires a brief notice in this place also.

On the stone circles of England and Scotland are found a variety of "Archaic Sculpturings" of various types. The most common of these are the cup-marks which are thus described by Sir James Simpson at page 2 of his work.

"First type, single cups. The simplest type of these ancient stone and rock cuttings consists of incised, hollowed out depressions or cups, varying from an inch to three inches and more in diameter. For the most part these cup-cuttings are shallow, consequently their depth is usually far less than their diameter; it is often not more than half an inch, and rarely exceeds an inch or an inch and a half. On the same stone or each surface they are commonly carved out of many different sizes. These cup excavations are, on the whole, usually more smooth and polished over their cut surfaces than the ring cuttings are. Sometimes they form the only sculpturings on the stone or rock, as on many Scottish monoliths, but more frequently they are found mixed up and intermingled with ring cuttings. Among the sculptured rock surfaces, for instance, in Argyleshire, there are in one group at Auchuabreach thirty-nine or forty cup cuttings, and the same number of ring cuttings, and at Camber there are twenty-nine figures, namely, nine single cups, seven cups surrounded by single rings, and thirteen cups encircled by a series of concentric rings."

Now, although I had paid several visits to the barrows of Junapani and the neighbourhood and had noticed on the boulders small holes placed in lines, I had paid no particular attention to their existence. From their regularity and arrangement and general position on the top of the stones (Pl. V, fig. 1, 2, 3), I was led to suppose that they were perhaps the work of the cowherds, who grazed their cattle in the neighbourhood, and that they were, perhaps, used for some game similar to that which commended the tri-junction boundary marks of the village lands to the attention of the village children, who, when I was in the Settlement Department, used

to be continually causing damage to our boundary platforms. Subsequent examination shewed these marks on the sides of the boulders also (Pl. V, fig. 4), suggesting that they could not be used for the game in question. About the same time I was fortunate enough to receive Sir James Simpson's book, above alluded to, which established, without doubt, the exact similarity between the marks on the Indian barrows and on the monolithic remains which have been examined and described in England.

Two classes of "cup-marks" the one large, the other small, have been found, similar to those in the English barrows. But as yet I have not traced on the barrows any of the concentric circles noticed by Sir James Simpson.* They may, however, be yet brought to light together with perhaps other and more striking particulars, linking these tumuli still more closely to the remains found at home. On Plate II, Fig. 1, a sketch taken from Sir J. Simpson's book of a tumulus with the "cup-marks" on one of the stones is given, and on Plate V will be found a sketch of a stone at Junapani with the markings as I saw them some years ago. It will be seen, that, with the exception of the stone chamber, the absence of which in the Nagpur tombs has already been accounted for, there would be no difficulty in mistaking the picture for a sketch of one of the Junapani barrows. The "cup-markings" are all shallow, the depth of the cup being about $\frac{1}{4}$ of an inch at the most, age probably having told on the carvings.

In the present paper, I will not stop to discuss at any length the significance of these marks. The chief point I am anxious here to establish is their resemblance to the markings found in the same class of tumuli at home. It may, however, be noticed that the view generally adopted at home is, that the "cup marks" are a rough sort of ornamentation, and that they have no signification whatsoever. Without venturing an opinion regarding the object which the constructors of the barrows had in carving these marks on the stones, I would repeat what I have said in my paper on the Kumaon markings, that the arrangement of the cups is peculiar and would seem to indicate some design beyond mere ornamentation. On no two stones are the marks similar. The combination of large and small cups is striking (Pl. V, fig. 4). The permutations of the cups on the stones already examined are very numerous.† The manner too, in which the large cups are introduced, would seem to suggest that the combinations of marks may have some meaning, which may, perhaps, yet be discovered and explained. Those who are acquainted with the system of printing by the electric telegraph, and the combination of long and short strokes in Morse

* These have been found by me on the Kumaon Rocks. See Bengal Asiatic Society's Journal, January, 1877.

† These are shewn in the paper on the Kumaon markings. See Journal B. A. S., January, 1877.

Code, and the recent arrangements for communicating signals to troops at night, by short and long flashes of lamps, specially adapted to the purpose, and by day by the sun-telegraph, will perhaps agree, that it is not altogether impossible, that these marks may have some, as yet hidden, signification. The Agham writing consists, I understand, of a combination of long and short strokes. This writing is found chiefly on sandstone, on which it would not be difficult to cut out long strokes with a chisel. On hard trap, however, it would be found much easier to make "cup-marks," by working a chisel round and round, than to cut strokes; and is it impossible, that, perhaps, on the trap boulders, the "cups," large and small, took the place of the long and short strokes of the sandstone lettering, in the same way that the barrows took the place of Cromlechs in the localities in which sandstone was not procurable? Or that, if this theory is untenable, the marks denote the age of the deceased or the number of his children, or the number of the enemies slain by the warrior, whose remains are buried in the tomb encircled by the stone?

Whatever conclusion may be arrived at regarding the possible correctness of any of the above suggestions, I think it will be generally admitted, that the four points of resemblance noticed above as existing between the remains found in this country and in Europe are of more than common interest.

The sketches will shew that (I) the shape of the tumuli in India and in Europe is the same.

(II) The barrows in India and in Europe always face towards the south.

(III) The remains found in the Indian barrows resemble almost exactly the remains dug out of similar burial-places in Europe.

(IV) The cup-marks on the boulders which surround the Indian tombs are identical with the marks found on the stones placed around the same class of tumuli in Europe.

The inferences to be drawn from these points will be noticed in a later paper.

